



John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Scott J. Nally, Director

Eval 0608  
Enf. 030

August 15, 2013

Ms. Katie Kistler  
AK Steel Corporation  
1801 Crawford Street  
Middletown, Ohio 45043

**RE: AK Steel Corporation (OHD004234480)  
Compliance Evaluation Inspection**

Dear Ms. Kistler:

Thank you for assisting Russ Brown and I during the June 24, 2013, inspection of AK Steel Corporation's (AK Steel), Middletown, Ohio facility. The purpose of the inspection was to determine AK Steel's compliance with Ohio's hazardous waste laws as found in Chapter 3734. of the Ohio Revised Code (ORC) and Chapter 3745. of the Ohio Administrative Code (OAC). Our inspection included a review of company operations and written documentation.

Based on the inspection, AK Steel is in violation of the following hazardous waste regulation:

- **OAC Rule 3745-52-20(A), Manifest – general requirement:** A generator who transports, or offers for transport a hazardous waste for offsite treatment, storage, or disposal must prepare a manifest on U.S. EPA form 8700-22, according to the instruction included in the Appendix to 40 CFR Par 262.

AK Steel Corp failed to comply with this rule when they sent shipments of spent pickle liquor (SPL) to AMROX III in Grandview, Indiana on a Bill of Lading and not a hazardous waste manifest. On July 1, 2013, AK Steel sent an email stating all future shipments to AMROX will be accompanied by a hazardous waste manifest. To return to compliance, please submit copies of hazardous waste manifests for AK Steel's recent shipments to AMROX.

**Additional Information Requested to Determine Compliance:**

- **Tank Certification Documentation:** In order to determine compliance with the tank certification requirements, please submit the requested information as described below for AK Steel's SPL tanks.

The tank systems will be evaluated following the tank system requirements found in OAC rule 3745-52-34 and OAC rule 3745-66-90 through 3745-66-100. To assist AK Steel in submitting all the required information, a copy of OAC Rule 3745-66-92

and 3745-66-93 have been enclosed. These rules describe in detail the required information needed for Ohio EPA to determine AK Steel's compliance.

At a minimum, the following information needs to be submitted in order for Ohio EPA to complete the tank assessment:

- Tank System Requirements - A written assessment attesting that the design, installation, and structural integrity of the system is adequate for the management of hazardous waste; a certification by an independent, registered, professional engineer; consideration of the design standards of the system; consideration of the hazardous characteristics of the wastes; an evaluation by a corrosion expert; a determination of design and operational measures that will be needed to protect the tank system from potential damage; design consideration to ensure that the tank foundations will maintain the load of a full tank; design consideration for anchoring the unit to prevent flotation; and design considerations to ensure the tank system will withstand the effects of frost heave.
- Tank System Requirements - Written statements by those persons who supervised installation or certified design of the new tank system, showing that the tank system was properly installed and designed, and the required repairs were performed; inspections for damage and/or inadequate construction and installation; deficiencies were corrected before the tank was put into use; proper backfilling was completed; tightness tests were performed and proper repairs were made if needed; proper support and protection of the ancillary equipment was completed; and supervision of the installation of field fabric corrosion protection.
- Secondary Containment - Documentation for the secondary containment including documentation that the liner is designed or operated to contain 100% of the capacity of the largest tank; prevents run-on and infiltration, or that the collection system has excess capacity to contain run-on and infiltration from a 25 year, 24 hour storm; is free of cracks and gaps; completely surrounds the tank and covers the earth likely to be contacted by waste during a release; chemically resistant water stops are in place at all points; and compatible interior coating or lining to prevent migration of waste into the concrete is present.
- Secondary Containment Design / Operation / Installation - Documentation showing the secondary containment has been designed, installed, and operated to prevent any migration of waste or liquids to the soil, groundwater, or surface water and is capable of detecting and collecting releases and accumulated liquids; has been constructed or lined with compatible material of sufficient strength to prevent failure; is placed on a foundation or base capable of providing support; provided with a leak detection system designed/operated to detect failure to primary or secondary containment or any release of hazardous waste within 24 hours or at earliest practicable time; sloped designed to drain and remove liquid resulting from leaks, spills, or precipitation is removed within 24 hours or in a timely manner.

- Ancillary Equipment Requirements - Documentation that shows the ancillary equipment has secondary containment (such as double-walled piping, jacketing, or a trench) or is one of the following: above ground piping that is inspected daily; welded flanges, welded joints and /or welded connections that are inspected daily; seal less or magnetic coupling pumps and/or seal less valves; or pressurized above ground piping systems with automatic shut-off devices that are inspected daily.

Please be advised that violations cited above will continue until the violations have been properly abated. Failure to comply with Chapter 3734. of the Ohio Revised Code, and rules promulgated thereunder, may result in a civil penalty of up to \$10,000 per day for each violation. It is imperative that you return to compliance. If circumstances delay the abatement of violations, AK Steel is requested to submit written correspondence of the steps that will be taken by date certain to attain compliance.

**Please submit the requested information to this office within 14 days of receipt of this letter.** Enclosed are copies of the checklists completed as a result of the inspection. You can find Ohio's hazardous waste rules and other information on the division's web page at: <http://www.epa.ohio.gov/dmwm/>. If you have any questions, please either email me at [jeff.smith@epa.ohio.gov](mailto:jeff.smith@epa.ohio.gov) or call me at (937) 285-6070.

Sincerely,



Jeff Smith  
Environmental Specialist III  
Division of Materials and Waste Management

JS/tb

ec: DMWM Data Entry/Facility File  
George Strobel, DHWM, SWDO

**NOTICE:**

Ohio EPA's failure to list specific deficiencies or violations in this letter does not relieve your company from having to comply with all applicable regulations.

Send to Central Office <input type="checkbox"/>	<b>Ohio Environmental Protection Agency</b> <b>RCRA SUBTITLE C SITE</b> <b>IDENTIFICATION/VERIFICATION FORM</b>	For Ohio EPA use only
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Completed verification forms required to be submitted to CO should be e-mailed to [RCRAInfoData@epa.state.oh.us](mailto:RCRAInfoData@epa.state.oh.us).

Site EPA ID No.	EPA ID Number: <b>OHD004234480</b>							
Site Name	Name: <b>AK Steel Corporation</b>				Website: (Optional)			
Site Location Information	Street Address: <b>1801 Crawford Street</b>							
	City, Town, or Village: <b>Middletown</b>				State: <b>OH</b>			
	County Name: <b>Butler</b>							
Site Land Type (check only one)	Private <input checked="" type="checkbox"/>	County <input type="checkbox"/>	District <input type="checkbox"/>	Federal <input type="checkbox"/>	Indian <input type="checkbox"/>	Municipal <input type="checkbox"/>	State <input type="checkbox"/>	Other <input type="checkbox"/>
NAICS code(s) <a href="http://www.census.gov/epcd/www/naics.html">www.census.gov/epcd/www/naics.html</a>								

Facility Representative	First Name: <b>Katie</b>		MI:	Last Name: <b>Kistler</b>	
Additional names can be recorded in number 12	Title: <b>Senior Environmental Engineer</b>				
	Phone Number: <b>513-425-3531</b>			Phone Number Extension:	
	E-Mail Address: <b>katie.kistler@aksteel.com</b>				
Only provide address information if it is different than the site address	Fax Number: <b>513-425-3079</b>			Fax Number Extension:	
	Street or P.O. Box: <b>1801 Craford Street</b>				
	City, Town or Village: <b>Middletown</b>				
	State: <b>Ohio</b>			Zip Code: <b>45043</b>	

Legal Owner And Operator of the Site. List Additional Owners and/or Operators in the Comment Section or on another copy of this form page	Name of Site's Legal Owner: <b>AK Steel Corporation</b>				Date Became Owner (mm/dd/yyyy): <b>4/1/1994</b>				
	Owner Type:	Private <input checked="" type="checkbox"/>	County <input type="checkbox"/>	District <input type="checkbox"/>	Federal <input type="checkbox"/>	Indian <input type="checkbox"/>	Municipal <input type="checkbox"/>	State <input type="checkbox"/>	Other <input type="checkbox"/>
	Street or P.O. Box: <b>9227 centre Pointe Drive</b>								
	City, Town or Village: <b>West Chester</b>				Owner Phone #: <b>513-425-2528</b>				
	State: <b>Ohio</b>				Country: <b>Butler</b>		Zip Code: <b>45069</b>		
	Name of Site's Operator: <b>AK Steel Corporation</b>				Date Became Operator (mm/dd/yyyy):				
	Operator Type:	Private <input type="checkbox"/>	County <input type="checkbox"/>	District <input type="checkbox"/>	Federal <input type="checkbox"/>	Indian <input type="checkbox"/>	Municipal <input type="checkbox"/>	State <input type="checkbox"/>	Other <input type="checkbox"/>
	Street or P.O. Box:								
	City, Town or Village:				Operator Phone #:				
	State:				Country:		Zip Code:		

VIOLATIONS CITED?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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<b>TYPE OF HANDLER - MARK "X" AS APPROPRIATE</b>	
<input type="checkbox"/> Not a HW Generator	<input checked="" type="checkbox"/> Large Quantity Generator (LQG)
<input type="checkbox"/> UNKNOWN: Cited for violation of 3745-52-11	<input type="checkbox"/> Small Quantity Generator (SQG)
<input type="checkbox"/> Short-Term/Temporary Generator (generates from a short-term or one-time event and not from on-going processes). <i>Check the box for the applicable generator status and provide a comment.</i>	<input type="checkbox"/> Conditionally Exempt Small Quantity Generator
	<input type="checkbox"/> U.S. Importer of Hazardous Waste
	<input type="checkbox"/> Mixed Waste (Hazardous and Radioactive) Generator

TYPE OF REGULATED WASTE ACTIVITY (MARK "X" IN ALL OF THE APPROPRIATE BOXES)

- |   |  |
|---|--|
| <input type="checkbox"/> Hazardous Waste Transporter                    | <input type="checkbox"/> Exempt Boiler and/or Industrial Furnace           |
| <input type="checkbox"/> Hazardous Waste Transfer Facility              | <input type="checkbox"/> Small Quantity On-Site Burner Exemption           |
| <input type="checkbox"/> Treater, Storer or Disposer of Hazardous Waste | <input type="checkbox"/> Smelting, Melting, Refining Furnace Exemption     |
| <input type="checkbox"/> Recycler of Hazardous Waste                    | <input checked="" type="checkbox"/> Underground Injection Control Facility |
| <input type="checkbox"/> 72-Hour Recycler                               | <input type="checkbox"/> Receives Hazardous Waste from Off-site            |

UNIVERSAL WASTE ACTIVITIES (INDICATE TYPES OF UNIVERSAL WASTE MANAGED)

(CHECK ALL BOXES THAT APPLY)

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Small Quantity Handler of Universal Waste                         | <input type="checkbox"/> Destination Facility for Universal Waste |
| <input type="checkbox"/> Large Quantity Handler of Universal Waste<br>(accumulates 5,000 kg. or more) |   |

CHECK ALL BOXES BELOW THAT APPLY FOR THE TYPES OF UNIVERSAL WASTE THE FACILITY MANAGES

- Batteries  
 Pesticides  
 Mercury containing equipment  
 Lamps

USED OIL ACTIVITIES (INDICATE TYPE(S) OF ACTIVITY(S))

- Used Oil Generator  
 Used Oil Transporter  
 Used Oil Transfer Facility  
 Used Oil Processor  
 Used Oil Re-refiner  
 Off-Specification Used Oil Burner  
 Used Oil Fuel Marketer who directs shipment of Off-Spec Used Oil  
 Used Oil Fuel Marketer who first claims the Used Oil meets the specifications

Eligible Academic Entities with Laboratories: Facility has previously notified that they are opting into managing laboratory hazardous waste pursuant to OAC rules 3745-52-200 through 3745-52-216. Check the box(es) below to indicate the laboratory type.

- College or University  
 Teaching hospital that is owned by or has a formal written affiliation agreement with a college or university  
 Non-profit Institute that is owned by or has a formal written affiliation agreement with a college or university

Waste Codes for Federally Regulated Hazardous Wastes. Please list the codes for the federally regulated hazardous waste handled at the site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page or list them in the comments if more space is needed. If the waste codes are the same as listed in the most recent RCRAinfo source record, you do not need to list them. Instead just indicate the date of the most recent source record.

D002                      K062

COMMENTS: USE THIS AREA TO DESCRIBE WHETHER THE INSPECTION WAS ANNOUNCED, WHETHER THE WASTE IS STORED IN TANKS OR CONTAINERS, ETC.

- |            |   |                             |                                      |
|------------|---|-----------------------------|--------------------------------------|
| Announced  | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | Additional Facility Representatives: |
| Tanks      | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |                                      |
| Containers | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |                                      |

Name of Inspector(s)  
**Jeff Smith**

Name of Inspector(s)  
**Russ Brown**

Date of Inspection/Time  
 (mm/dd/yyyy) (hh:mm)  
**06/24/2013**

**Comments:**

**LARGE QUANTITY GENERATOR REQUIREMENTS  
COMPLETE AND ATTACH A PROCESS DESCRIPTION SUMMARY**

CESQG: =100 Kg. (Approximately 25-30 gallons) of waste in a calendar month or < 1 Kg. of acutely hazardous waste.  
 SQG: Between 100 and 1,000 Kg. (About 25 to under 300 gallons) of waste in a calendar month.  
 LQG: = 1,000 Kg. (~300 gallons) of waste in a calendar month or =1 Kg. of acutely hazardous waste in a calendar month.  
**NOTE: To convert from gallons to pounds: Amount in gallons x Specific Gravity x 8.345 = Amounts in pounds.**

Safety Equipment Used:

**GENERAL REQUIREMENTS**

1.	Have all wastes generated at the facility been adequately evaluated? [3745-52-11]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
2.	Are records of waste determination being kept for at least 3 years? [3745-52-40(C)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
3.	Has the generator obtained a U.S. EPA identification number? [3745-52-12]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
4.	Were annual reports filed with Ohio EPA on or before March 1 <sup>st</sup> ? [3745-52-41(A)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
5.	Are annual reports kept on file for at least 3 years? [3745-52-40(B)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
6.	Has the generator transported or caused to be transported hazardous waste to <b>other</b> than a facility authorized to manage the hazardous waste? [ORC 3734.02(F)]	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>
7.	Has the generator disposed of hazardous waste <b>on-site without a permit</b> or at another facility <b>other</b> than a facility authorized to dispose of the hazardous waste? [ORC 3734.02(E)&(F)]	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>
8.	Does the generator accumulate hazardous waste?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

**NOTE: If the LQG does not accumulate or treat hazardous waste, it is not subject to 52-34 standards. All other requirements still apply, e.g., annual reports, manifest, marking, record keeping, LDR, etc.**

9.	Has the generator accumulated hazardous waste on-site in excess of 90 days without a permit or an extension from the director ORC §3734.02(E)&(F)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>
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**NOTE: If F006 waste is generated and accumulated for > 90 days and is recycled see 3745-52-34(G)&(H).**

10.	Does the generator treat hazardous waste in a: [ORC 3734.02(E)&(F)]	
a.	Container that meets 3745-66-70 to 3745-66-77?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
b.	Tank that meets 3745-66-90 to 3745-66-100 except 3745-66-97(C)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
c.	Drip pads that meet 3745-69-40 to 3745-69-45?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
d.	Containment building that meets 3745-256-100 to 3745-256-102?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

**NOTE: Complete appropriate checklist for each unit.**

**NOTE: If waste is treated to meet LDRs, use LDR checklist.**

11.	Does the generator export hazardous waste? If so:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
a.	Has the generator notified U.S. EPA of export activity? [3745-52-53(A)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
b.	Has the generator complied with special manifest requirements? [3745-52-54]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
c.	For manifests that have not been returned to the generator: has an exception report been filed? [3745-52-55]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
d.	Has an annual report been submitted to U.S. EPA? [3745-52-56]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

e.	Are export related documents being maintained on-site? [3745-52-57(A)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
<b>MANIFEST REQUIREMENTS</b>		
12.	Have all hazardous wastes shipped off-site been accompanied by a manifest? (U.S. EPA Form 8700-22) [3745-52-20(A)(1)]	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>
13.	Have items (1) through (20) of each manifest been completed? [3745-52-20(A)(1)]&[3745-52-27(A)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<i>NOTE: U.S. EPA Form 8700-22(A) (the continuation form) may be needed in addition to Form 8700-22. In these situations items (21) through (35) must also be completed. [3745-52-20(A)(1)]</i>		
14.	Does each manifest designate at least one facility which is permitted to handle the waste? [3745-52-20(B)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<i>NOTE: The generator may designate on the manifest one alternate facility to handle the waste in the event of an emergency which prevents the delivery of waste to the primary designated facility. [3745-52-20(C)]</i>		
15.	If the transporter was unable to deliver a shipment of hazardous waste to the designated facility, did the generator designate an alternate TSD facility or give the transporter instructions to return the waste? [3745-52-20(D)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
16.	Have the manifests been signed by the generator and initial transporter? [3745-52-23(A)(1)&(2)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<i>NOTE: Remind the generator that the certification statement they signed indicates: 1) they have properly prepared the shipment for transportation and 2) they have a program in place to reduce the volume and toxicity waste they generate.</i>		
17.	If the generator received a rejected load or residue, did the generator:	
a.	Sign item 20 of the new manifest or item 18c of the original manifest? [3745-52-23(F)(1)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
b.	Provide the transporter a copy of the manifest? [3745-52-23(F)(2)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
c.	Send a copy of the manifest to the designated facility that returned the shipment with 30 days after delivery of the rejected shipment? [3745-52-23(F)(3)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
18.	If the generator did not receive a return copy of each completed manifest within 35 days of the waste being accepted by the transporter, did the generator contact the transporter and/or TSD facility to check on the status of the waste? [3745-52-42(A)(1)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
19.	If the generator has not received the manifest within 45 days, did the generator file an exception report with Ohio EPA? [3745-52-42(A)(2)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
20.	Are signed copies of all manifests and any exception reports being retained for at least three years? [3745-52-40]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<i>NOTE: A generator who sends a shipment of hazardous waste to a TSD facility with the understanding that the TSD facility can accept and manage the waste and later receives that shipment back as a rejected load or residue may accumulate the waste on-site for &lt;90 days or &lt;180 days depending on the amount of hazardous waste on-site in that calendar month. [3745-52-34(M)]</i>		
<i>NOTE: Waste generated at one location and transported along a publicly accessible road for temporary consolidated storage or treatment on a contiguous property also owned by the same person is not considered "on-site" and manifesting and transporter requirements must be met. To transport "along" a public right-of-way the destination facility has to act as a transfer facility or have a permit because this is considered to be "off-site." For additional information see the definition of "on-site" in OAC rule 3745-50-10.</i>		
<b>PERSONNEL TRAINING</b>		
21.	Does the generator have a training program which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to their positions? [3745-65-16(A)(2)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
22.	Does the personnel training program, at a minimum, include instructions to ensure that facility personnel are able to respond effectively to emergencies involving hazardous waste by familiarizing them with emergency procedures, emergency equipment and emergency systems (where applicable)? [3745-65-16(A)(3)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

**NOTE:** For facility employees that receive emergency response training pursuant to OSHA regulations, the facility is not required to provide separate emergency response training, provided that the overall facility training meets all the requirements of OAC 3745-65-16(A). [3745-65-16(A)(4)]

23.	Is the personnel training program directed by a person trained in hazardous waste management procedures? [3745-65-16(A)(2)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
24.	Do new employees receive training within six months after the date of hire (or assignment to a new position)? [3745-65-16(B)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
25.	Does the generator provide refresher training to employees during each period from January 1 <sup>st</sup> to December 31 <sup>st</sup> and does each training occur within 15 months after the previous training? [3745-65-16(C)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
26.	Does the generator keep records and documentation of:	
a.	Job titles? [3745-65-16(D)(1)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
b.	Job descriptions? [3745-65-16(D)(2)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
c.	Type and amount of training given to each person? [3745-65-16(D)(3)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
d.	Completed training or job experience required? [3745-65-16(D)(4)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
27.	Are training records for current personnel kept until closure of the facility and are training records for former employees kept for at least three years from the date the employee last worked at the facility? [3745-65-16(E)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

**NOTE:** The following section can be used by the inspector to document that all personnel who are involved with hazardous waste management have been trained. The employees who need training (written and/or on-the-job) may include the following: environmental coordinators, drum handlers, emergency coordinators, personnel who conduct hazardous waste inspections, emergency response teams, personnel who prepare manifest, etc.

Job Performed	Name of Employee	Date Trained

**CONTINGENCY PLAN**

28.	Does the owner/operator have a contingency plan to minimize hazards to human health or the environment from fires, explosions or any unplanned release of hazardous waste? [3745-65-51(A)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
29.	Does the plan describe the following:	
a.	Actions to be taken in response to fires, explosions or any unplanned release of hazardous waste? [3745-65-52(A)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
b.	Arrangements with emergency authorities? [3745-65-52(C)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
c.	A current list of names, addresses and telephone numbers (office and home) of all persons qualified to act as emergency coordinator? [3745-65-52(D)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
d.	A list of all emergency equipment, including: location, a physical description and brief outline of capabilities? [3745-65-52(E)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
e.	An evacuation plan for facility personnel where there is possibility that evacuation may be necessary? [3745-65-52(F)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

**NOTE:** If the facility already has a "Spill Prevention, Control and Countermeasures Plan" under 40 CFR Part 112 or some other emergency plan, the facility can amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with OAC requirements. The facility may develop one contingency plan which meets all regulatory requirements. Ohio EPA recommends that the plan be based on the "National Response Team's Integrated Contingency Plan Guidance (One Plan)." [3745-65-52(B)]

30.	Is a copy of the plan (plus revisions) kept on-site and been given to all emergency authorities that may be requested to provide emergency services? [3745-65-53(A)&(B)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
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31.	Has the generator revised the plan in response to rule changes, facility, equipment and personnel changes, or failure of the plan? [3745-65-54]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
32.	Is an emergency coordinator available at all times (on-site or on-call)? [3745-65-55]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<p><i>NOTE: The emergency coordinator shall be thoroughly familiar with: (a) all aspects of the facility's contingency plan; (b) all operations and activities at the facility; (c) the location and characteristics of waste handled; (d) the location of all records within the facility; (e) facility layout; and (f) shall have the authority to commit the resources needed to implement provisions of the contingency plan.</i></p>		
<b>EMERGENCY PROCEDURES</b>		
33.	Has there been a fire, explosion or release of hazardous waste or hazardous waste constituents since the last inspection? If so:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>
	a. Was the contingency plan implemented? [3745-65-51(B)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	b. Did the facility follow the emergency procedures in 3745-65-56(A) through (H)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	c. Did the facility submit a report to the Director within 15 days of the incident as required by 3745-65-56(I)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
<p><i>NOTE: OAC 3745-65-51(B) requires that the contingency plan be implemented immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents, which could threaten human health and the environment.</i></p>		
<b>PREPAREDNESS AND PREVENTION</b>		
34.	Is the facility operated to minimize the possibility of fire, explosion, or any unplanned release of hazardous waste? [3745-65-31]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
35.	Does the generator have the following equipment at the facility, if it is required due to actual hazards associated with the waste:	
	a. Internal communications or alarm system? [3745-65-32(A)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
	b. Emergency communication device? [3745-65-32(B)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
	c. Portable fire control, spill control and decon equipment? [3745-65-32(C)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
	d. Water of adequate volume/pressure per documentation or facility rep? [3745-65-32(D)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<p><i>NOTE: Verify that the equipment is listed in the contingency plan.</i></p>		
36.	Is emergency equipment tested (inspected) as necessary to ensure its proper operation in time of emergency? [3745-65-33]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
37.	Are emergency equipment tests (inspections) recorded in a log or summary? [3745-65-33]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
38.	Do personnel have immediate access to an internal alarm or emergency communication device when handling hazardous waste (unless the device is not required under 3745-65-32)? [3745-65-34(A)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
39.	If there is only one employee on the premises, is there immediate access to a device (eg. phone, and hand held two-way radio) capable of summoning external emergency assistance (unless not required under 3745-65-32)? [3745-65-34(B)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
40.	Is adequate aisle space provided for unobstructed movement of emergency or spill control equipment? [3745-65-35]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
41.	Has the generator attempted to familiarize emergency authorities with possible hazards and facility layouts? [3745-65-37(A)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
42.	Where authorities have declined to enter into arrangements or agreements, has the generator documented such a refusal? [3745-65-37(B)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

SATELLITE ACCUMULATION AREA REQUIREMENTS		
43.	Does the generator ensure that satellite accumulation area(s):	
a.	Are at or near a point of generation? [3745-52-34(C)(1)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
b.	Are under the control of the operator of the process generating the waste? [3745-52-34(C)(1)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
c.	Do not exceed a total of 55 gallons of hazardous waste per waste stream? [3745-52-34(C)(1)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
d.	Do not exceed one quart of acutely hazardous waste at any one time? [3745-52-34(C)(1)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
e.	Containers are closed, in good condition and compatible with wastes stored in them? [3745-52-34(C)(1)(a)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
f.	Containers are marked with words "Hazardous Waste" or other words identifying the contents? [3745-52-34(C)(1)(b)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
44.	Is the generator accumulating hazardous waste(s) in excess of the amounts listed in the preceding question? If so:	
a.	Did the generator comply with 3745-52-34(A)(1) through (4) or other applicable generator requirements within three days? [3745-52-34(C)(2)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
b.	Did the generator mark the container(s) holding excess with the accumulation date when the 55 gallon (one quart) limit was exceeded? [3745-52-34(C)(2)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
<p><i>NOTE: The satellite accumulation area is limited to 55 gallons of hazardous waste accumulated from a distinct point of generation in the process under the control of the operator of the process generating the waste (less than 1 quart for acute hazardous waste). There could be individual waste streams accumulated in an area from different points of generation.</i></p>		
USE AND MANAGEMENT OF CONTAINERS IN <90 DAY ACCUMULATION AREAS		
45.	Has the generator marked containers with the words "Hazardous Waste?" [3745-52-34(A)(3)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
46.	Is the accumulation date on each container? [3745-52-34(A)(2)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
47.	Are hazardous wastes stored in containers which are:	
a.	Closed (except when adding/removing wastes)? [3745-66-73(A)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
b.	In good condition? [3745-66-71]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
c.	Compatible with wastes stored in them? [3745-66-72]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
d.	Handled in a manner which prevents rupture/leakage? [3745-66-73(B)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<p><i>NOTE: Record location on process summary sheets, photograph the area, and record on facility map.</i></p>		
48.	Is the container accumulation areas(s) inspected at least once during the period from Sunday to Saturday? [3745-66-74]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
a.	Are inspections recorded in a log or summary? [3745-66-74]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
49.	Are containers of ignitable or reactive wastes located at least 50 feet (15 meters) from the facility's property line? [3745-66-76]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
50.	Are containers of incompatible wastes stored separately from each other by means of a dike, berm, wall or other device? [3745-66-77(C)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
51.	If the generator places incompatible wastes, or incompatible wastes and materials in the same container, is it done in accordance with 3745-65-17(B)? [3745-66-77(A)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

52.	If the generator places hazardous waste in an unwashed container that previously held an incompatible waste, is it done in accordance with 3745-65-17(B)? [3745-66-77(B)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
<p><i>NOTE: OAC 3745-65-17(B) requires that the generator treat, store, or dispose of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials so that it does not create undesirable conditions or threaten human health or the environment.</i></p>		
53.	If the generator has closed a <90 day accumulation area does the closure appear to have met the closure performance standard of 3745-66-11? [3745-52-34(A)(1)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
<p><i>NOTE: Please provide a description of the unit and documentation provided by the generator for the file to demonstrate that closure was completed in accordance with the closure performance standards. If the generator has closed a &lt;90 day tank, closure must also be completed in accordance with OAC 3745-66-97 (except for paragraph C of this rule). [3745-52-34]</i></p>		
<p><b>PRE-TRANSPORT REQUIREMENTS</b></p>		
54.	Does the generator package/label its hazardous waste in accordance with the applicable DOT regulations? [3745-52-30, 3745-52-31 and 3745-52-32(A)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
55.	Does each container ≤119 gallons have a completed hazardous waste label? [3745-52-32(B)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
56.	Before off-site transportation, does the generator placard or offer the appropriate DOT placards to the initial transporter? [3745-52-33]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

**SMALL QUANTITY UNIVERSAL WASTE HANDLER REQUIREMENTS**

**Large Quantity Universal Waste Handler (LQUWH) = 5,000 Kg or more**

**Small Quantity Universal Waste Handler (SQUWH) = 5,000 Kg or less**

**PROHIBITIONS**

1.	Did the SQUWH dispose of universal waste? [3745-273-11(A)]	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>
2.	Did the SQUWH dilute or treat universal waste, except when responding to releases as provided in OAC rule 3745-273-17 or managing specific wastes as provided in OAC rule 3745-273-13? [3745-273-11(B)]	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>

**WASTE MANAGEMENT AND LABELING/MARKING**

**UNIVERSAL WASTE BATTERIES**

3.	Are batteries that show evidence of leakage, spillage or damage that could cause leaks contained? [3745-273-13(A)(1)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
4.	If batteries are contained, are the containers closed and structurally sound, compatible with the contents of the battery and lack evidence of leakage, spillage or damage that could cause leakage? [3745-273-13(A)(1)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
5.	Are the casings of the batteries breached, not intact, or open (except to remove the electrolyte)? [3745-273-13(A)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
6.	If the electrolyte is removed or other wastes generated, has it been determined whether the electrolyte or other wastes exhibit a characteristic of hazardous waste? [3745-273-13(A)(3)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
a.	If the electrolyte or other waste is characteristic, is it managed in compliance with OAC Chapters 3745-50 through 3745-69? [3745-273-13(A)(3)(a)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
b.	If the electrolyte or other waste is not hazardous, is it managed in compliance with applicable law? [3745-273-13(A)(3)(b)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
7.	Are the batteries or containers of batteries labeled with the words "Universal Waste-Battery(ies)" or "Waste Battery(ies)" or "Used Battery(ies)"? [3745-273-14(A)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

**UNIVERSAL WASTE PESTICIDES**

8.	Does the SQUWH prevent releases to the environment by managing pesticides in containers that are closed, structurally sound, compatible with the pesticides, and lack evidence of leakage, spillage, or damage? [3745-273-13(B)(1)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
9.	If the original pesticide container is in poor condition, was it over-packed into an acceptable container? [3745-273-13(B)(2)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
10.	If the pesticide is stored in a tank, are the requirements of rules 3745-66-90 through 3745-66-101, except for paragraph (C) of 3745-66-97, of the OAC met? (Use tank checklist) [3745-273-13(B)(3)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
11.	If pesticides are stored in a transport vehicle, is it closed, structurally sound, compatible with the pesticide(s), and does it lack evidence of leakage, spillage, or damage that could cause leakage? [3745-273-13(B)(4)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
12.	Are recalled universal waste pesticides that are in containers, tanks, or transport vehicles labeled with the label that was on or accompanied the product as sold or distributed and labeled with the words "Universal Waste Pesticides" or "Waste Pesticides"? [3745-273-14(B)(1)&(2)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
13.	Are unused pesticide products that are in containers, tanks, or transport vehicles labeled with either the label that was on the product when purchased (if still legible), the appropriate DOT label, or the designated label prescribed by the pesticide collection program and labeled with the words "Universal Waste-Pesticides" or "Waste Pesticides"? [3745-273-14(C)(1)&(2)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

**UNIVERSAL WASTE MERCURY-CONTAINING EQUIPMENT**

14.	Has mercury-containing equipment with non-contained elemental mercury or that shows evidence of leakage, spillage or damage that could cause	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
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	leaks been placed in a container that is closed, structurally sound, compatible with contents of the device and lacks evidence of leakage, spillage or damage that could cause leakage and is designed to prevent escape of mercury into the environment by volatilization or any other means? [3745-273-13(C)(1)]	
15.	If the mercury-containing ampules are removed, does the SQUWH: [3745-273-13(C)(2)]	
	a. Remove and manage the ampules in a manner to prevent breakage and is the removal done over or in a containment device? [3745-273-13(C)(2)(a)&(b)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	b. Have a clean-up system readily available to transfer spilled mercury to another container that meets the requirements of OAC rule 3745-52-34 and is the spilled mercury transferred immediately? [3745-273-13(C)(2)(c)&(d)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	c. Ensure that the area where ampules are removed is well ventilated and monitored in compliance with applicable OSHA exposure levels for mercury? [3745-273-13(C)(2)(e)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	d. Ensure that employees are thoroughly familiar with the proper waste handling and emergency procedures? [3745-273-13(C)(2)(f)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	e. Ensure that removed ampules are stored in closed, non-leaking containers that are in good condition? [3745-273-13(C)(2)(g)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	f. Pack removed ampules in containers with packing material to prevent breakage during storage, handling and transportation? [3745-273-13(C)(2)(h)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
16.	If the open original housing holding mercury is removed from a mercury-containing equipment that does not contain an ampule, does the SQUWH: [3745-273-13(C)(3)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	a. Immediately seal the original housing holding the mercury with an air-tight seal to prevent the release of any mercury to the environment? [3745-273-13(C)(3)(a)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	b. Follow all requirements for removing ampules and managing removed ampules in accordance with 3745-273-13(C)(2)? [3745-273-13(C)(3)(b)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
17.	When removing mercury containing ampules from mercury-containing equipment or sealing mercury from its original housing if there are mercury or clean-up residues resulting from spills or leaks, and/or other waste generated (e.g., remaining mercury-containing device), has it been determined whether those exhibit a characteristic of hazardous waste identified in OAC rules 3745-51-20 to 3745-51-24? [3745-273-13(C)(4)(a)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	a. If the residues, and/or wastes are characteristic, are they managed in compliance with Chapters 3745-50 through 3745-69, 3745-205, 3745-256, 3745-266, and 3745-270 of the Administrative Code? (The handler is considered the generator of the mercury, residues, and/or other waste and is subject to OAC Chapter 3745-52) [3745-273-13(C)(4)(b)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
18.	Is mercury-containing equipment or containers of mercury-containing equipment labelled either "Universal Waste-Mercury-Containing Equipment" or "Waste Mercury-Containing Equipment" or "Used Mercury-Containing Equipment"? [3745-237-14(D)(1)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
19.	Are mercury-containing thermostats or containers containing ONLY thermostats labeled either "Universal Waste-Mercury Thermostat(s)" or "Waste Mercury Thermostat(s)" or "Used Mercury Thermostat(s)"? [3745-273-14(D)(2)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
<b>UNIVERSAL WASTE LAMPS</b>		
20.	Does the SQUWH contain lamps in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with contents of the lamps? Are containers or packages closed and do they lack	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

	evidence of leakage, spillage or damage that could cause leakage? [3745-273-13(D)(1)]	
21.	Are lamps that show evidence of breakage, leakage or damage that could cause a release of mercury or hazardous constituents into the environment immediately cleaned up? Are they placed into a container that is closed, structurally sound, compatible with the contents of the lamps, and lack evidence of leakage, spillage or damage that could cause leakage or releases of mercury or hazardous waste constituents to the environment? [3745-273-13(D)(2)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<p><b>NOTE: Treatment (such as crushing) by a UWH is prohibited under this rule unless the facility is permitted for such activities [3745-273-31(B)]. A generator crushing lamps must manage lamps according to hazardous waste rules (OAC Chapter 3745-52). Lamp crushing is a form of generator treatment (OAC rule 3745-52-34). Crushed lamps must be transported by a registered hazardous waste transporter to a permitted hazardous waste facility using a hazardous waste manifest.</b></p>		
22.	Are the lamps or containers or packages of lamps labeled with the words "Universal Waste-Lamp(s)" or "Waste Lamp(s)" or "Used Lamp(s)"? [3745-273-14(E)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<b>ACCUMULATION TIME</b>		
23.	Is the waste accumulated for less than one year? [3745-273-15(A)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
a.	If not, is the waste accumulated over one year in order to facilitate proper recovery, treatment or disposal? (Burden of proof is on the handler to demonstrate) [3745-273-15(B)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
<p><b>NOTE: Accumulation is defined as date generated or date received from another handler.</b></p>		
24.	Is the handler able to demonstrate the length of time the universal waste has been accumulated? [3745-273-15(C)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<b>EMPLOYEE TRAINING</b>		
25.	Are employees who handle or have the responsibility for managing universal waste informed of waste handling/emergency procedures, relative to their responsibilities? [3745-273-16]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<b>RESPONSE TO RELEASES</b>		
26.	Are releases of universal waste and other residues immediately contained? [3745-273-17(A)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
27.	Is the material released characterized? [3745-273-17(B)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
28.	If the material released is a hazardous waste, was it managed as required in OAC Chapters 3745-50 through 3745-69? (If the waste is hazardous, the handler is considered the generator of the waste and is subject to OAC Chapter 3745-52) [3745-273-17(B)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
<b>OFF-SITE SHIPMENTS</b>		
<p><b>NOTE: If a SQUWH self-transportes waste, then the handler must comply with the Universal Waste transporter requirements.</b></p>		
29.	Are universal wastes sent to either another handler, destination facility or foreign destination? [3745-273-18(A)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
30.	Is the handler aware of DOT requirements for packaging and shipping? If no, make aware of 49 CFR 171-180.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
31.	Prior to shipping universal waste off-site, does the originating handler ensure that the receiver agrees to receive the shipment? [3745-273-18(D)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
32.	Has the originating handler ever had an off-site shipment rejected by another handler or destination facility?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>
a.	If yes, did the originating handler receive the waste back or agree to where the shipment was sent? [3745-273-18(E)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

33.	If a handler rejects a partial or full load from another handler, does the receiving handler contact the originating handler and discuss and do <u>one of the following</u> :	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	a. Send the waste back to the originating handler or send the shipment to a destination facility (If both the originating and receiving handler agree)? [3745-273-18(F)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
34.	If the handler received a shipment of hazardous waste that was not a universal waste, did the SQUWH immediately notify Ohio EPA? [3745-273-18(G)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

**EXPORTS**

*NOTE: Small quantity handlers that export waste to the countries listed in 40 CFR 262.58(a)(1) are subject to 40 CFR 262 subpart H. Small quantity handlers that export waste to a foreign destination other than the countries listed in 40 CFR 262.58(a)(1) are subject to 40 CFR 262.53, 40 CFR 262.56(a)(1) to (a)(4), (a)(6), and (b), 40 CFR 262.57, and 40 CFR 262 subpart E. [3745-273-20]*

*NOTE: Violations regarding exporting universal waste to foreign destinations should be referred to U.S. EPA Region 5 because the federal counterpart provisions are not delegable to states.*

**USED OIL INSPECTION CHECKLIST  
GENERATORS, COLLECTION CENTERS AND AGGREGATION POINTS**

*NOTE: 1. A facility is subject to the federal SPCC regulations (40 CFR 112) if it is non-transportation related (e.g., fixed) and has an aggregate above ground storage capacity greater than 1,320 gallons or a total underground storage capacity greater than 42,000 gallons of oil (including used oil), and there is reasonable expectation of a discharge to navigable waters.*

*2. Inspectors can check BUSTR's web-site at [https://www.comapps.ohio.gov/sfm/fire\\_apps/bust/bustr/PublicInquiry.asp](https://www.comapps.ohio.gov/sfm/fire_apps/bust/bustr/PublicInquiry.asp) to determine if a UST containing used oil is registered with BUSTR. Inspectors may call BUSTR at 614-752-7938 or a BUSTR site coordinator to report an unregistered UST or a UST that appears to not be in compliance with BUSTR regulations. A list of BUSTR coordinators by county are at:*

*[https://www.comapps.ohio.gov/sfm/fire\\_apps/bust/bustr/SearchByCounty.asp](https://www.comapps.ohio.gov/sfm/fire_apps/bust/bustr/SearchByCounty.asp).*

**PROHIBITIONS**

1.	Does the generator manage used oil in a surface impoundment or waste pile? If yes:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>
a.	Is the surface impoundment or waste pile regulated as a hazardous waste management unit? [3745-279-12(A)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

*NOTE: For example, used oil contaminated scrap metal stored in a pile.*

2.	Is used oil used as a dust suppressant? [3745-279-12(B)]	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>
3.	Is off-specification used oil fuel burned for energy recovery in devices specified in 3745-279-12(C)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

*NOTE: Multiple used oil checklists may be applicable if used oil handler is performing multiple tasks (e.g., if generating used oil and shipping directly to a burner, complete generator and marketer checklists at a minimum).*

**GENERATOR STANDARDS**

4.	Does the generator mix hazardous waste with used oil? If so,	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>
a.	Is the mixture managed as specified in 3745-279-10(B)? [3745-279-21(A)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

*NOTE: Used Oil mixed with listed (3745-51-30 to 3745-51-35) or characteristic (3745-51-20 to 3745-51-24) hazardous waste are subject to regulation as a hazardous waste, unless the listed hazardous waste is listed solely because it exhibits a hazardous characteristic, and the resultant mixtures do not exhibit a characteristic. Mixtures of used oil and CESQG hazardous waste are subject to OAC Chapter 3745-279.*

5.	Does the generator of a used oil containing greater than 1,000 ppm total halogens manage the used oil as a hazardous waste unless the presumption is rebutted successfully? [3745-279-21(B)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
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*NOTE: If used oil contains greater than 1000 ppm total halogens, it is presumed to be listed hazardous waste until the presumption is successfully rebutted.*

6.	Does the generator store used oil in tanks; or containers; or a unit(s) subject to regulation as a hazardous waste management unit? [3745-279-22(A)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
7.	Are containers and aboveground tanks used to store used oil in good condition with no visible leaks? [3745-279-22(B)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
8.	Are containers, above ground tanks, and fill pipes used for underground tanks clearly labeled or marked "Used Oil?" [3745-279-22(C)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
9.	Has the generator, upon detection of a release of used oil, done the following: [3745-279-22(D)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
a.	Stopped the release?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
b.	Contained the release?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
c.	Cleaned up and properly managed the used oil and other materials?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
d.	Repaired or replaced the containers or tanks prior to returning them to service, if necessary?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

<b>ON-SITE BURNING IN SPACE HEATER</b>		
10.	Does the generator burn used oil in used-oil fired space heaters? [3745-279-23] If so:	
a.	Does the heater burn only used oil that owner/operator generates or used oil received from household do-it-yourself (DIY) used oil generators?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
b.	Is the heater designed to have a maximum capacity of not more than 0.5 million BTU per hour?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
c.	Are the combustion gases from heater vented to the ambient air?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
<i>NOTE: Ash accumulated in a space heater must be managed in accordance with 3745-279-10(E).</i>		
<b>GENERATOR TRANSPORTATION</b>		
11.	Does the generator have the used oil hauled only by transporters that have obtained a U.S. EPA ID#? [3745-279-24]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
12.	If the generator self-transport used oil to an approved collection site or to an aggregation point owned by the generator: [3745-279-24]	
a.	Does the generator transport used oil in a vehicle owned by the generator or an employee of the generator? [3745-279-24]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
b.	Does the generator transport more than 55 gallons of used oil at any time? [3745-279-24]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
<i>NOTE: Used oil generators may arrange for used oil to be transported by a transporter without a U.S. EPA ID # if the used oil is reclaimed under a contractual agreement (i.e., tolling arrangement).</i>		
<b>COLLECTION CENTERS AND AGGREGATION POINTS</b>		
13.	Is the DIY used oil collection center in compliance with the generator standards in 3745-279-20 to 3745-279-24? [3745-279-30]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
14.	Is the non-DIY used oil collection center registered with Ohio EPA? [3745-279-31]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
15.	Is the used oil aggregation point in compliance with the generator standards in 3745-279-20 to 3745-279-24? [3745-279-32]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
<i>NOTE: Complete Used Oil Generator and any other applicable used oil handler checklist (e.g., marketer, burner, etc.) for used oil collection centers and aggregation points.</i>		

### GENERATOR LDR REQUIREMENTS

*NOTE: This LDR checklist does not include the requirements for generators that treat to meet LDR standards. If the generator treats, the inspector should use the stand-alone Generator LDR checklist instead of this checklist.*

#### GENERAL REQUIREMENTS

1.	If LDRs do not apply, does the generator have a statement that lists how the HW was generated, why LDRs don't apply and where the HW went? [3745-270-07(A)(7)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
2.	Did the generator determine if the HW/soil must be treated to meet the LDR treatment standard prior to disposal? Generator knowledge or testing may be used. [3745-270-07(A)(1)] If not,	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
	a. Did the generator send the waste to a permitted HW TREATMENT facility? [3745-270-07(A)(1)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<p><i>NOTE: This is done by determining if the HW/soil contains levels of constituents greater than the levels given in its LDR treatment standard in 3745-270-40. However, if a specific treatment method is given in 3745-270-40 for the HW, no determination is required [3745-270-07(A)(1)(b)]. If soil, generator can choose to have soil treated to LDR levels given in 3745-270-49 (alternative treatment levels for soils).</i></p>		
3.	Does the generator have documentation of how he determined whether the HW/soil meets or does not meet the LDR treatment standard in 2, above? [3745-270-07(A)(6)(a) or 3745-270-07(A)(6)(b)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
4.	Does the generator keep the documentation required in #2, above, on-site for at least three years from the last date the HW/soil was sent on-site/off-site for treatment/disposal? [3745-270-07(A)(8)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
5.	Does the generator generate a listed HW that exhibits a characteristic? If yes,	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
	a. Did the generator determine if the listed HW exhibits a characteristic that is not treated under the LDR treatment standard for the listed HW? [3745-270-09(A)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<p><i>FOR EXAMPLE: F006 that exhibits the characteristic for silver or K062 that is corrosive, D002. Review LDR treatment standard in 3745-270-40 to determine what constituents the listed HW is treated for.</i></p>		
6.	Did the generator determine if its characteristic HW contains underlying hazardous constituents that need to be treated? [3745-270-09(A)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<p><i>NOTE: This is done by evaluating which underlying hazardous constituents (UHC) are in the HW at levels above the universal treatment standards given in 3745-270-48. This requirement does not apply to high total organic carbon (i.e., contains &gt;10% TOC) D001 wastes or listed HWs.</i></p> <p><i>NOTE: Written documentation of this determination is not required.</i></p>		
7.	Did the generator treat his HW /soil on-site to <u>meet</u> the LDR treatment standard?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>
<p><i>NOTE: If "Yes" see question #16.</i></p>		
8.	Did the generator send a one-time LDR notification form to the TSD with the first shipment to that facility? [3745-270-07(A)(2)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
	a. If the generator chose not to make the determination of whether his waste must be treated, did he send a notice to the TSD facility with each shipment? [3745-270-07(A)(2)] If so, did the notice include:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
	i. Applicable HW codes?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
	ii. Manifest number of the first shipment to the TSD?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
	iii. A statement that conveys that the HW may or may not be subject to the LDR treatment standards and the TSD must make that determination.?"	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
9.	Did the generator resubmit the LDR notification form to the TSD when the HW changed or the generator used a new TSD? [3745-270-07(A)(2)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
10.	Does the generator have a copy of the LDR notification form/notice on file?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

	[3745-270-07(A)(2)]	
a.	Is the form/notice kept on file for three years after last HW shipped? [3745-270-07(A)(8)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<b>NOTIFICATION FORM</b>		
11.	Does the LDR Notification form contain the following information:	
a.	Manifest number of the first waste shipment to the TSD? [3745-270-07(A)(2)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
b.	Applicable waste codes (includes characteristic codes for a listed HW if applicable)? [3745-270-07(A)(2)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
c.	A statement that conveys that the HW is subject to LDRs and must be treated to meet LDR treatment requirements? [3745-270-07(A)(2)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
d.	A designation whether the HW is a wastewater or non-wastewater? [3745-270-07(A)(2)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<i>NOTE: A wastewater contains &lt;1% by wt. total suspended solids (TSS) and &lt;1% by wt. TOC. If you doubt the HW is a wastewater or non-wastewater, the HW can be tested using for example, Standard Methods (SM) 160.2 for TSS, SW-846 method 9060a for TOC.</i>		
e.	Designation of the waste subcategory when applicable? [3745-270-07(A)(2)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<i>NOTE: Subcategories are found on the LDR treatment standards table under the applicable waste code. Not all HWs have subcategories</i>		
f.	A listing of the underlying hazardous constituents for which a characteristic waste must be treated? [3745-270-07(A)(2)]	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<i>NOTE: Not required if the waste is high TOC D001 or the TSD tests its treatment residues for all underlying hazardous constituents.</i>		
g.	If the HW is F001-F005 or F039, did the generator note on the LDR form what solvents or constituents, respectively, the waste contains and must be treated for? [3745-270-07(A)(2)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
<i>NOTE: Not required if the TSD tests its treatment residues for all underlying hazardous constituents.</i>		
<b>PROHIBITED DILUTION</b>		
12.	Is the HW treated by burning? If "No" go to #15.	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>
13.	Is the HW a metal-bearing HW?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
<i>NOTE: Generally, metal-bearing HWs contain heavy metals above TCLP levels or were listed due to the presence of metals. A list of the restricted metal-bearing HWs is given in the Appendix to 3745-270-03.</i>		
14.	a. Metal-bearing HWs cannot be incinerated, combusted or, blended and burned for fuel unless <b>one</b> of the following conditions apply. [3745-270-03(c)]	
	i. Contains > 1% TOC?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	ii. Contains organic constituents or cyanide at levels greater than the UTS levels?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	iii. Is made up of combustible material e.g., paper, wood, plastic?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	iv. Has a reasonable heating value (e.g., > 5000 Btu)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	v. Co-generated with a HW that must be combusted?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	b. If all responses to 14 a.i. through 14 a.v. are "No", HW is being improperly treated by dilution, violation of 3745-270-03(C). Is HW being treated by dilution?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
15.	Was the HW treated by wastewater treatment?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>

	a. Is a LDR treatment method, other than DEACT or a numerical value, specified for the waste? [3745-270-03(B) and 3745-270-40(A)(3)]	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
<i>NOTE: If "Yes", HW is improperly being treated by dilution.</i>		
	b. Does the waste carry the D001 code <u>and</u> contain $\geq 10\%$ TOC?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
	c. Does the wastewater treatment process include a process to separate/recover the organic phase of the waste?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
<i>NOTE: If the answers to b &amp; c are "yes" and "no", respectively, waste is improperly being treated by dilution and generator is in violation of [3745-270-03(B)] and 3745-270-40(A)(3)].</i>		
<i>NOTE: A list of separation/recovery processes are given in 3745-270-42 under RORG.</i>		

3745-66-92

**Design and installation of new tank systems or components.**

(A) Owners or operators of new tank systems or components must ensure that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection so that it will not collapse, rupture, or fail. The owner or operator must obtain a written assessment reviewed and certified by ~~an independent,~~ a qualified, ~~registered~~ professional engineer in accordance with paragraph (D) of rule 3745-50-42 of the Administrative Code attesting that the system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. This assessment must include, ~~at a minimum,~~ the following information:

- (1) Design standard(s) according to which the tank(s) and ancillary equipment is or will be constructed,
- (2) Hazardous characteristics of the waste(s) to be handled,
- (3) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system is or will be in contact with the soil or with water, a determination by a corrosion expert of:
  - (a) Factors affecting the potential for corrosion including but not limited to:
    - (i) Soil moisture content;
    - (ii) Soil pH;
    - (iii) Soil sulfides level;
    - (iv) Soil resistivity;
    - (v) Structure to soil potential;
    - (vi) Influence of nearby underground metal structures (e.g., piping);
    - (vii) Stray electric current; and
    - (viii) Existing corrosion-protection measures (e.g., coating, cathodic protection); and

(b) The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following:

(i) Corrosion-resistant materials of construction such as special alloys, fiberglass-reinforced plastic;

(ii) Corrosion-resistant coating (such as epoxy, fiberglass) with cathodic protection (e.g., impressed current or sacrificial anodes); and

(iii) Electrical isolation devices such as insulating joints and flanges.

[~~Note~~Comment: The practices described in the "National Association of Corrosion Engineers (NACE)" standard, "Recommended Practice (RP-02-85) - Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and the "American Petroleum Institute (API)" publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems," may be used, where applicable, as guidelines in providing corrosion protection for tank systems.]

(4) For underground tank system components that are likely to be affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage, and

(5) Design considerations to ensure that:

(a) Tank foundations will maintain the load of a full tank;

(b) Tank systems will be anchored to prevent flotation or dislodgement where the tank system is placed in a saturated zone, or is located within a seismic fault zone; and

(c) Tank systems will withstand the effects of frost heave.

(B) The owner or operator of a new tank system must ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or ~~an independent, a qualified, registered~~ professional engineer, either of whom is trained

and experienced in the proper installation of tank systems, must inspect the system or component for the presence of any of the following items:

- (1) Weld breaks;
- (2) Punctures;
- (3) Scrapes of protective coatings;
- (4) Cracks;
- (5) Corrosion; and
- (6) Other structural damage or inadequate construction or installation

All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.

- (C) New tank systems or components and piping that are placed underground and that are backfilled must be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is carefully installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.
- (D) All new tanks and ancillary equipment must be tested for tightness prior to being covered, enclosed or placed in use. If a tank system is found not to be tight, all repairs necessary to remedy the leak(s) in the system must be performed prior to the tank system being covered, enclosed, or placed in use.
- (E) Ancillary equipment must be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion or contraction.

[~~Note~~Comment: The piping system installation procedures described in "American Petroleum Institute (API)" publication 1615 (November 1979), "Installation of Underground Petroleum Storage Systems," or ANSI standard B31.3, "Petroleum Refinery System," may be used, where applicable, as guidelines for proper installation of piping systems.]

- (F) The owner or operator must provide the type and degree of corrosion protection necessary, based on the information provided under paragraph (A)(3) of this rule, to ensure the integrity of the tank system. The installation of a corrosion protection system that is field-fabricated must be supervised by an independent corrosion

expert to ensure proper installation.

- (G) The owner or operator must obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of paragraphs (B) to (F) of this rule to attest that the tank system was properly designed and installed and that repairs, pursuant to paragraphs (B) and (D) of this rule were performed. These written statements must also include the certification statement as required in paragraph (D) of rule 3745-50-42 of the Administrative Code.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

Effective: 09/05/2010

R.C. 119.032 review dates: Exempt

CERTIFIED ELECTRONICALLY

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Certification

07/23/2010

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Date

Promulgated Under: 119.03  
Statutory Authority: 3734.12  
Rule Amplifies: 3734.12  
Prior Effective Dates: 12/08/1988

3745-66-93

**Containment and detection of releases.**

(A) In order to prevent the release of hazardous ~~wastes~~waste or hazardous constituents to the environment, secondary containment that meets the requirements of this rule must be provided [except as provided in paragraphs (F) and (G) of this rule]:

- (1) For all new and existing tank systems or components, prior to their being put into service; and
- ~~(2) For all existing tanks used to store or treat U.S. EPA hazardous waste nos. F020, F021, F022, F023, F026, and F027, within two years after January 12, 1987;~~
- ~~(3) For those existing tank systems of known and documentable age, within two years after January 12, 1987, or when the tank systems have reached fifteen years of age, whichever comes later;~~
- ~~(4) For those existing tank systems for which the age cannot be documented, within eight years of January 12, 1987; but if the age of the facility is greater than seven years, secondary containment must be provided by the time the facility reaches fifteen years of age, or within two years of January 12, 1987, whichever comes later; and~~
- ~~(5)~~(2) For tank systems that store or treat materials that become hazardous wastes subsequent to January 12, 1987, within the time intervals required in paragraphs (A)(1) to (A)(4) of this rule, except that the date that a material becomes a hazardous waste must be used in place of January 12, 1987, within two years after the hazardous waste listing, or when the tank system has reached fifteen years of age, whichever comes later.

(B) Secondary containment systems must be:

- (1) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and
- (2) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

(C) To meet the requirements of paragraph (B) of this rule, secondary containment systems must be, at a minimum:

- (1) Constructed of or lined with materials that are compatible with the waste(s) to be placed in the tank system and must have sufficient strength and thickness

to prevent failure due to pressure gradients (including static head and external hydrological forces), physical contact with the waste to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation (including stresses from nearby vehicular traffic);

- (2) Placed on a foundation or base capable of providing support to the secondary containment system and resistance to pressure gradients above and below the system and capable of preventing failure due to settlement, compression, or uplift;
- (3) Provided with a leak detection system that is designed and operated so that it will detect the failure of either the primary and secondary containment structure or any release of hazardous waste or accumulated liquid in the secondary containment system within twenty-four hours, or at the earliest practicable time if the existing detection technology or site conditions will not allow detection of a release within twenty-four hours;
- (4) Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within twenty-four hours, or in as timely a manner as is possible to prevent harm to human health or the environment, if removal of the released waste or accumulated precipitation cannot be accomplished within twenty-four hours.

[Note/Comment: If the collected material is hazardous under Chapter 3745-51 of the Administrative Code, it is subject to management as a hazardous waste in accordance with all applicable requirements of Chapters 3745-52, 3745-53, 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, and 3745-256 of the Administrative Code. If the collected material is discharged through a point source to waters of Ohio, it is subject to the requirements of rule 3745-33-04 and Chapters 3745-3 and 3745-33 of the Administrative Code. If discharged to publicly owned treatment works (POTW), it is subject to the requirements of Chapters 3745-1 and 3745-3 of the Administrative Code. If the collected material is released to the environment, it may be subject to the reporting requirements of 40 CFR Part 302.]

(D) Secondary containment for tanks must include one or more of the following devices:

- (1) A liner (external to the tank);
- (2) A vault;
- (3) A double-walled tank; or

(4) An equivalent device as approved by the director.

(E) In addition to the requirements of paragraphs (B), (C), and (D) of this rule, secondary containment systems must satisfy the following requirements:-:

(1) External liner systems must be:

- (a) Designed or operated to contain one hundred per cent of the capacity of the largest tank within its boundary;
- (b) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a twenty-five-year, twenty-four-hour rainfall event;
- (c) Free of cracks or gaps;
- (d) Designed and installed to completely surround the tank and to cover all surrounding earth likely to come into contact with the waste if released from the tank(s) (i.e., capable of preventing lateral as well as vertical migration of the waste); and
- (e) Constructed with chemical-resistant water stops in place at all joints, if any (for concrete liners only); and
- (f) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete (for concrete liners only).

(2) Vault systems must be:

- (a) Designed or operated to contain one hundred per cent of the capacity of the largest tank within its boundary;
- (b) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a twenty-five-year, twenty-four-hour rainfall event;

- (c) Constructed with chemical-resistant water stops in place at all joints (if any);
  - (d) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete;
  - (e) Provided with means to protect against the formation of and ignition of vapors within the vault, if the waste being stored or treated:
    - (i) Meets the definition of ignitable waste under rule 3745-51-21 of the Administrative Code; or
    - (ii) Meets the definition of reactive waste under rule 3745-51-23 of the Administrative Code and may form an ignitable or explosive vapor; and
  - (f) Provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.
- (3) Double-walled tanks must be:
- (a) Designed as an integral structure (i.e., an inner tank within an outer shell) so that any release from the inner tank is contained by the outer shell;
  - (b) Protected, if constructed of metal, from both corrosion of the primary tank interior and the external surface of the outer shell; and
  - (c) Provided with a built-in, continuous leak detection system capable of detecting a release within twenty-four hours or at the earliest practicable time, if the owner or operator can demonstrate to the director and the director concurs, that the existing leak detection technology or site conditions will not allow detection of a release within twenty-four hours.

[NoteComment: The provisions outlined in the "Steel Tank Institute's (STI) Standard for Dual Wall Underground Steel Storage Tank" may be used as guidelines for aspects of design of underground steel double-walled tanks.]

(F) Ancillary equipment must be provided with full secondary containment (e.g., trench, jacketing double-walled piping) that meets the requirements of paragraphs (B) and (C) of this rule, except for:

- (1) Aboveground piping (exclusive of flanges, joints, valves, and connections) that are visually inspected for leaks on a daily basis;
- (2) Welded flanges, welded joints, and welded connections that are visually inspected for leaks on a daily basis;
- (3) Sealless or magnetic coupling pumps and sealless valves that are visually inspected for leaks on a daily basis; and
- (4) Pressurized aboveground piping systems with automatic shut-off devices (e.g., excess flow check valves, flow metering shutdown devices, loss of pressure-actuated shut-off devices) that are visually inspected for leaks on a daily basis.

(G) The owner or operator may obtain a variance from the requirements of this rule if the director finds, as a result of a demonstration by the owner or operator, either: that alternative design and operating practices, together with location characteristics, will prevent the migration of hazardous waste or hazardous constituents into the ground water or surface water at least as effectively as secondary containment during the active life of the tank system; or that in the event of a release that does migrate to ground water or surface water, no substantial present or potential hazard will be posed to human health or the environment. New underground tank systems may not, per a demonstration in accordance with paragraph (G)(2) of this rule, be exempted from the secondary containment requirements of this rule. Application for a variance as allowed in this paragraph does not waive compliance with the requirements of rules 3745-66-90 to 3745-66-101 of the Administrative Code for new tank systems.

- (1) In deciding whether to grant a variance based on a demonstration of equivalent protection of ground water and surface water, the director will consider:
  - (a) The nature and quantity of the waste;
  - (b) The proposed alternate design and operation;
  - (c) The hydrogeologic setting of the facility, including the thickness of soils between the tank system and ground water; and

(d) All other factors that would influence the quality and mobility of the hazardous constituents and the potential for them to migrate to ground water or surface water.

(2) In deciding whether to grant a variance, based on a demonstration of no substantial or present or potential hazard, the director will consider:

(a) The potential adverse effects on ground water, surface water, and land quality taking into account:

(i) The physical and chemical characteristics of the waste in the tank system, including its potential for migration;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The potential for health risks caused by human exposure to waste constituents;

(iv) The potential for damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

(v) The persistence and permanence of the potential adverse effects.

(b) The potential adverse effects of a release on ground water quality, taking into account:

(i) The quantity and quality of ground water and the direction of ground water flow;

(ii) The proximity and withdrawal rates of water in the area;

(iii) The current and future uses of ground water in the area; and

(iv) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground water quality; and

(c) The potential adverse effects of a release on surface water quality, taking into account:

- (i) The quantity and quality of ground water and the direction of ground water flow;
  - (ii) The patterns of rainfall in the region;
  - (iii) The proximity of the tank system to surface waters;
  - (iv) The current and future uses of surface waters in the area and any water quality standards established for those surface waters; and
  - (v) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality; and
- (d) The potential adverse effects of a release on the land surrounding the tank system, taking into account:
- (i) The patterns of rainfall in the region; and
  - (ii) The current and future uses of the surrounding land.
- (3) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with the requirements of paragraph (G)(1) of this rule, at which a release of hazardous waste has occurred from the primary tank system but has not migrated beyond the zone of engineering control (as established in the variance), must:
- (a) Comply with the requirements of paragraphs (A), (B), (C), (E), and (F) of rule 3745-66-96 of the Administrative Code; and
  - (b) Decontaminate or remove contaminated soil to the extent necessary to:
    - (i) Enable the tank system, for which the variance was granted, to resume operation with the capability for the detection of and response to releases at least equivalent to the capability it had prior to the release; and
    - (ii) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water; and

- (c) If contaminated soil cannot be removed or decontaminated in accordance with paragraph (G)(3)(b) of this rule, comply with the requirements of paragraph (B) of rule 3745-66-97 of the Administrative Code;
- (4) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with the requirements of paragraph (G)(1) of this rule, at which a release of hazardous waste has occurred from the primary tank system and has migrated beyond the zone of engineering control (as established in the variance), must:
- (a) Comply with the requirements of paragraphs (A), (B), (C), and (D) of rule 3745-66-96 of the Administrative Code; and
  - (b) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water, if possible, and decontaminate or remove contaminated soil. If contaminated soil cannot be decontaminated or removed, or if ground water has been contaminated, the owner or operator must comply with the requirements of paragraph (B) of rule 3745-66-97 of the Administrative Code;
  - (c) If repairing, replacing, or reinstalling the tank system, provide secondary containment in accordance with the requirements of paragraphs (A) to (F) of this rule or reapply for a variance from secondary containment and meet the requirements for new tank systems in rule 3745-66-92 of the Administrative Code if the tank system is replaced. The owner or operator must comply with these requirements even if contaminated soil can be decontaminated or removed, and ground water or surface water has not been contaminated.
- (H) The following procedures must be followed in order to request a variance from secondary containment.
- (1) The director must be notified in writing by the owner or operator that he intends to conduct and submit a demonstration for a variance from secondary containment as allowed in paragraph (G) of this rule according to the following schedule:
    - (a) For existing tank systems, at least twenty-four months prior to the date that the secondary containment must be provided in accordance with paragraph (A) of this rule; and
    - (b) For new tank systems, at least thirty days prior to entering into a contract

for installation of the tank system.

- (2) As part of the notification, the owner or operator must also submit to the director a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. The demonstration must address each of the factors listed in paragraph (G)(1) or (G)(2) of this rule.
  - (3) The demonstration for a variance must be completed and submitted to the director within one hundred eighty days after notifying the director of intent to conduct the demonstration.
  - (4) The director will inform the public, through a newspaper notice, of the availability of the demonstration for a variance. The notice must be placed in a daily or weekly major local newspaper of general circulation and must provide at least thirty days from the date of the notice for the public to review and comment on the demonstration for a variance. The director will also hold a public hearing in response to a request or at his own discretion, whenever such a hearing might clarify one or more issues concerning the demonstration for a variance. Public notice of the hearing will be given at least thirty days prior to the date of the hearing and may be given at the same time as notice of the opportunity for the public to review and comment on the demonstration. These two notices may be combined.
  - (5) The director will approve or disapprove the request for a variance within ninety days ~~of~~after receipt of the demonstration from the owner or operator and will notify in writing the owner or operator and each person who submitted written comments or requested notice of the variance decision. If the demonstration for a variance is incomplete or does not include sufficient information, the ninety-day time period will begin when the director receives a complete demonstration, including all information necessary to make a final determination. If the public comment period in paragraph (H)(4) of this rule is extended, the ninety-day time period will be similarly extended.
- (I) All tank systems, until such time as secondary containment meeting the requirements of this rule is provided, must comply with the following:
- (1) For non-enterable underground tanks, a leak test that meets the requirements of paragraph (B)(5) of rule 3745-66-91 of the Administrative Code must be conducted at least annually;
  - (2) For other than non-enterable underground tanks, and for all ancillary equipment, ~~an annual~~the owner or operator must either conduct a leak test, as described in paragraph (I)(1) of this rule; or an internal inspection or other tank integrity

examination by ~~an independent,~~ a qualified, ~~registered~~ professional engineer that addresses cracks, leaks, and corrosion, ~~and~~ or erosion ~~must be conducted~~ at least annually. The owner or operator must remove the stored waste from the tank, if necessary, to allow the condition of all internal tank surfaces to be assessed.

~~[NoteComment: The practices described in the "American Petroleum Institute (API) Publication Guide for Inspection and Refining Equipment, Chapter XIII, 'Atmospheric and Low Pressure Storage Tanks' "(API)" publication, "Guide for Inspection of Refinery Equipment," chapter XIII, "Atmospheric and Low-Pressure Storage Tanks," fourth edition, 1981, may be used, when applicable, as guidelines for assessing the overall condition of the tank system.]~~

- (3) The owner or operator must maintain on file at the facility a record of the results of the assessments conducted in accordance with paragraphs (I)(1) to (I)(3) of this rule.
- (4) If a tank system or component is found to be leaking or unfit for use as a result of the leak test or assessment in paragraphs (I)(1) to (I)(3) of this rule, the owner or operator must comply with the requirements of rule 3745-66-96 of the Administrative Code.

~~[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]~~

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Effective: 09/05/2010  
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CERTIFIED ELECTRONICALLY

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Certification

07/23/2010

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Date

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